

ABSTRACT OF DISCLOSURE

A Frequency Mapping Coding (FMC) scheme varies the application of error correction redundancy to transmitted data based on the channel transmission characteristics and the likelihood of error resulting from characteristics of the data stream being transmitted over the channel. The FMC is an error correction coding scheme making use of the non-linear feed-back mechanism and variable bit input step size to control redundancy applied. The FMC scheme accommodates the non-symmetrical nature of the SNR in bandwidth limited communications environments such as DSL to allow application of IQ based modulation, such as QAM, to these channels and is flexible for varying channel characteristics.